

Montana Department of

ENVIRONMENTAL QUALITY

WATER PROTECTION BUREAU

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DEQ/WP
PERMITTING & COMPLIANCE DIV.

Agency Use

Permit No.:

MT6010130

Date Rec'd

4/2/12

Rec'd By

bs

FORM
NMP

Nutrient Management Plan

READ THIS BEFORE COMPLETING FORM: Before completing this form (Form NMP), Concentrated Animal Feeding Operation (CAFO) operators need to read the General Permit, particularly Part IV.A. CAFO operators also need to read the "Instructions For Filling Out Form NMP," found at the back of the Form. Form NMP is intended to help CAFO operators develop a site-specific Nutrient Management Plan, in compliance with Part IV.A of the General Permit and all applicable State rules and statutes. Your Nutrient Management Plan must be maintained at the site as required in Part III of the General Permit. Sections B and C on your Form NMP must state the information exactly the same way as it was stated on the most recently submitted version of your Form 2B. Attach additional pages as necessary, indicating the corresponding section number on this NMP form. For additional help in filling out this form please read the attached instructions. The 2008 General Permit, current fee schedule, and related forms are available from the Water Protection Bureau at (406) 444-3080 or <http://www.deq.mt.gov/wqinfo/MPDES/CAFO.asp>

Section A - NMP Status (Check one):

- ☒ New No prior NMP submitted for this site.
☐ Modification Change or update to existing NMP.

Permit Number: MT6010130 (Specify the permit number that was previously assigned to your facility.)

Section B - Facility or Site Information:

Site Name Steinbach Feedlot

Site Location 10 miles South East of Fairfield on highway 89; on Ashuelot Hill R

Nearest City or Town Fort Shaw County Custer

Section C - Applicant (Owner/Operator) Information:

Owner or Operator Name Scott Steinbach

Mailing Address 110 Ashuelot Hill Rd

City, State, and Zip Code Fort Shaw, MT 59443

Phone Number 406 264 5454 or 799 5454

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Section D - NMP Minimum Elements:

1. Livestock Statistics

Animal Type and number of animals	# of Days on Site (per year)	Annual Manure Production (tons, cu. yds. or gal)
1. 100 hd of replacement h/v	60-90 Days	111 tons
2. 50 hd of boughten calves	all year	337 tons
3.		
4.		
5.		
6.		
7.		
8.		

Method used for estimating annual manure production:

37 lbs per hd

2. Manure Handling

Describe manure handling at the facility:

We haul it out to our hay field, we dry it, scope it then remove it.

Frequency of Manure Removal from confinement areas:

We haul it out every spring and fall

Is this manure temporarily stored in any location other than the confinement area? ☐ Yes ☒ No
If so then how and where?

Is manure stored on impervious surface? ☐ Yes ☒ No

If yes, describe type and characteristics of this surface:

3. Waste Control Structures

Waste Control Structure (name/type)	Length (ft)	Width (ft)	Depth (ft)	Volume (cubic ft or gallons)
1. Waste Pond	100	100	2	200,000
2. (Converted pen to evaporation pond)				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				

4. Disposal of Dead Animals

Describe how dead animals are disposed of at this facility:

Bury them as they die at a minimum of 2 feet deep.

5. Clean Water Diversion Practices

Describe how clean water is diverted from production area:

A road way and berms have been put in place to prevent clean water from entering facility from the field.

6. Prohibiting Animals and Wastes from Contact with State Waters

Describe how animals and wastes are prohibited from direct contact with state waters:

No state water in facility,

All animals are fenced and contained away from state water

Describe how chemicals and other contaminants are handled on-site:

All pour on for cattle is locked away in the office
and all 24D and round up is locked away in storage shed

8. Best Management Practice (BMPS)

Describe in detail all temporary, permanent and structural Best Management Practices (BMPs) which will be used to control runoff of pollutants from facility's **production area**. Indicate the location of these measures. Include a schedule for implementation of each of these measures. Examples of BMP measures could include but are not limited to: constructing ditches, terraces, and waterways above an open lot to divert clean water run on; installing gutters, downspouts and buried conduits to divert roof drainage; providing more roofed area; decreasing open lot surface area; repairing or adjusting water systems to minimize water wastage; using practical amounts of water for cooling purposes; recycling water if practical and applicable.

Ditches and berms have been constructed to prevent any clean water from entering facility, we have clean water diversions, we also have ditches & berms to prevent any waste water run off.

In our pen we have automatic water, that are checked daily

Describe in detail all temporary, permanent and structural Best Management Practices (BMPs) which will be used to control runoff of pollutants from facility's **land application area**. Indicate the location of these practices. If not already in use, include a schedule for implementation of each of these measures. Attached details and specifications may be used to supplement this description. Examples of BMP measures could include but are not limited to: maintaining setbacks from surface waters for manure applications; managing irrigation practices to prevent ponding of wastewater on land application sites; never spray irrigating wastes onto frozen ground; consulting with the Department prior to applying any liquid waste to frozen or snow-covered ground; applying wastes at agronomic rates.

Plant sampling/tissue analysis	yes → <input checked="" type="radio"/> yes <input type="radio"/> no	Rotational grazing	<input checked="" type="radio"/> yes <input type="radio"/> no
Conservation or reduced tillage	<input checked="" type="radio"/> yes <input type="radio"/> no	Manure injection or incorporation	<input checked="" type="radio"/> yes <input type="radio"/> no
Terraces or other water control structures	<input checked="" type="radio"/> yes <input type="radio"/> no	Contour plantings	<input checked="" type="radio"/> yes <input type="radio"/> no
Riparian buffers or vegetative filter strips	<input checked="" type="radio"/> yes <input type="radio"/> no	Winter "scavenger" or cover crops	<input checked="" type="radio"/> yes <input type="radio"/> no

Other examples _____

9. Implementation, Operation, Maintenance and Record Keeping – Guidance

The permittee is required to develop guidance addressing implementation of NMP, proper operation and maintenance of the facility, and record keeping as described in Part II of the permit.

Has a guidance document been developed for the facility? ☒ Yes ☐ No

will develop and start in 2011

Certify the document addresses the following requirements:

Implementation of the NMP:	<input checked="" type="radio"/> Yes	<input type="radio"/> No
Facility operation and maintenance:	<input checked="" type="radio"/> Yes	<input type="radio"/> No
Record keeping and reporting:	<input checked="" type="radio"/> Yes	<input type="radio"/> No
Sample collection and analysis:	<input checked="" type="radio"/> Yes	<input type="radio"/> No
Manure transfer:	<input checked="" type="radio"/> Yes	<input type="radio"/> No

Provide name, date and location of most recent documentation:

Steinbach feedlot, in office which is maintained on sight

If your answer to any of the above question is no, provide explanation

Section E - Land Application

Will manure be land applied to land either owned, rented, or leased by the owner or operator of the facility?

No If no, then provide an explanation of how animal waste at this site are managed.

☒ Yes If yes, then the information requested in Section E must be provided.

There 140 Acres of Hay land

Photos and/or Maps

Attach an aerial photograph or map of the site where manure is to be applied. (Use multiple photos/maps if necessary to show required details.) The photo(s)/map(s) must be printed on no larger than an 11"x17" piece of paper, and must clearly identify the following items:

- Individual field boundaries for all planned land application areas
- A name, number, letter or other means of identifying each individual land application field
- The location of any down-gradient surface waters
- The location of any down-gradient open tile line intake structures
- The location of any down-gradient sinkholes
- The location of any down-gradient agricultural well heads
- The location of all conduits to surface waters
- The specific manure/waste handling or nutrient management restrictions associated with each land application field.
- The soil type(s) present and their locations within the individual land application field(s)
- The location of buffers and setbacks around state surface waters, well heads, etc.

Land Application Equipment Calibration

Describe the type of equipment used to land apply wastes and the calibrating procedures:

We weight truck empty and loaded

Manure Sampling and Analysis Procedures

A representative manure sample will be analyzed a minimum of once annually for Total Nitrogen, and Total Phosphorus. Analysis results will be reported in lbs/ton or lbs/1,000 gal. Results of these analyses will be used in determining application rates for manure, litter, and process wastewater.

Manure Sample collection will occur according to the following method:

☒ The recommended method(s) found in Section 5 of Department Circular DEQ 9

Other (describe) _____

Soil Sampling and Analysis Procedures

A representative soil sample from the top 6 inch layer of soil in each field will be analyzed for phosphorus content at least once every five years. Analyses will be conducted by a qualified laboratory, using the Olsen P test. Results will be reported in parts per million (ppm) and will be used in determining application rates for manure, litter, and process wastewater.

Soil sample collection will occur according to the following method:

☒ The recommended method(s) found in Section 5 of Department Circular DEQ 9

Other (describe) _____

Land Application Data-Narrative approach

The following must be filled out for each field to which manure, litter or process wastewater will or may be applied for the period of the permit (5 years). Use as many sheets as necessary to fulfill this requirement. **Fields with identical crops and soil types may be grouped together.**

Crops and Manure

Field Name and spreadable acres for each (for fields with identical crops and soils type):

Field # 1

140 Acres

Crop 1 (year 1 or ?) plant species

Irrigated (Y/N)

yes

Yield Goal (ton/ac or bushel/ac)

5 ton

N Content of soil as nitrate (lbs/acre or ppm)

estimated 5 lbs per Ac

P Content of soil as P₂O₅ (lbs/acre or ppm)

estimated less than 25 ppm

Time of Year When Application will Occur (month)

April

Application frequency (per year by month)

one time, for one week, spring

Form of manure (liquid/solid)

solid

Method of Application

truck spreader

Is manure incorporated or broadcast?

broadcast

Frequency of Application (yearly, biannual, etc.?)

Once, a year

Crop 2

Irrigated (Y/N)

All grains (wheat)

yes

Yield Goal (ton/ac or bushel/ac)

5 ton

N Content of soil as Nitrate (lbs/acre or ppm)

estimated 5 lbs per Ac

P Content of soil as P₂O₅ (lbs/acre or ppm)

estimated less than 25 ppm

Time of Year When Application will Occur (month)

April

Application frequency (per year, by month)

one time, for one week, spring

Form of manure (liquid/solid)

solid

Method of Application

~~broadcast~~ truck spreader

Is manure broadcast, injected or incorporated?

broadcast

Frequency of Application (Annual, Biannual, etc?)

once a year

Phosphorus Risk Assessment

The permittee shall assess the risk of phosphorus contamination of state waters. An assessment shall be conducted for each field, under the control of the operator, to which manure, litter or process wastewater will or may be applied. If a new field is added in the future, then the permittee must submit a revised (modified) NMP. The permittee has the option of using either Method A or Method B (below) to complete the assessment. Copies of all tables and calculations used to complete the assessments, as well as the results of the assessments, shall be submitted to the Department and copies shall be maintained on-site at the facility and available for Departmental review. The results of the assessments shall be used to determine the appropriate basis for land application of wastes from the facility.

Method Used

Indicate which method will be used to determine phosphorus application:

☒ Method A – Representative Soil Sample

Method B – Phosphorus Index

Method A – Representative Soil Sample

- Obtain one or more representative soil sample(s) from the field.
- Have the sample analyzed for Phosphorus by a qualified lab. The "Olsen P test" must be used for the analysis, and the result must be reported in parts per million (ppm).
- Using the results of the Olsen P test, determine the application basis according to the Table below

Soil Test	
<i>Olsen P Soil Test Result (ppm)</i>	<i>Application Basis</i>
<25.0	Nitrogen Needs Of Crop
25.1 - 100.0	Phosphorus Needs Of Crop
100.0 - 150.0	Phosphorus Needs up to Crop Removal Rate
>150.0	No Application

Method B – Phosphorus Index

- Complete a Phosphorus Index according to for each crop grown on each field. Complete table in Appendix A to calculate phosphorus index. For information on filling out specific sections Appendix A, please refer to Attachment 2 of Department Circular DEQ 9.
- Using the calculated Total Phosphorus Index Value, assign the overall site/field vulnerability to phosphorus loss according to the table below.

Total Phosphorus	
<i>Total Phosphorus Index Value</i>	<i>Site Vulnerability to Phosphorus Loss</i>
<11	Low
11-21	Medium
22-43	High
>43	Very High

- Using the calculated Site Vulnerability to Phosphorus Loss, determine the appropriate application basis according to the table below.

Site Vulnerability to Phosphorus Loss	
<i>Site Vulnerability to Phosphorus Loss</i>	<i>Application Basis</i>
Low	Nitrogen Needs
Medium	Nitrogen Needs
High	Phosphorus Need Up to Crop Removal
Very High	Phosphorus Crop Removal or No Application

- d) The permittee will complete the *Nutrient Budget Worksheet*, below, for each crop grown on each field to which manure or process waste water is or may be applied during the first year of application. A copy of each Nutrient Budget Worksheet will be maintained on site, and a copy will be submitted to the Department.

Nutrient Budget Worksheet

Site/Field:

<i>Nutrient Budget</i>		<i>Nitrogen-based Application</i>	<i>Phosphorus-based Application</i>
	Crop Nutrient Needs, lbs/acre included in Department Circular DEQ 9	100	
(-)	Credits from previous legume crops, lbs/acre (from DEQ-9), as applicable	10 lbs/prev/Ac	
(-)	Residuals from past manure production, lbs/acre (lbs/acre applied in previous year(s) x fractions listed in DEQ-9)	5 lbs/prev/Ac	
(-)	Nutrients supplied by commercial fertilizer and Biosolids, lbs/acre	0	
(-)	Nutrients supplied in irrigation water, lbs/acre	0	
	= Additional Nutrients Needed, lbs/acre	85	
	Total Nitrogen and Phosphorus in manure, lbs/ton or lbs/1,000 gal (from manure test)	10 lbs/ton	
(x)	Nutrient Availability factor (for Nitrogen based application see DEQ-9, below; for Phosphorus based application use 1.0)	.5	
	= Available Nutrients in Manure, lbs/ton or lbs/1,000 gal	.5	
	Additional Nutrients needed, lbs/acre (calculated above)	19	
(/)	Available Nutrients in Manure, lbs/ton or lbs/1,000 gal (calculated above)	1	
	= Manure Application Rate, tons/acre or 1,000 gal/acre	2 ton	

Comments:

Section F - CERTIFICATION**Permittee Information:**

This Form NMP must be completed, signed, and certified as follows:

- For a corporation, by a principal officer of at least the level of vice president;
- For a partnership or sole proprietorship, by a general partner or the proprietor, respectively; or
- For a municipality, state, federal, or other public facility, by either a principal executive officer or ranking elected official.

All Permittees Must Complete the Following Certification:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information; including the possibility of fine and imprisonment for knowing violations. [75-5-633, MCA]

A. Name (Type or Print)

Scott Steinbach

B. Title (Type or Print)

OWNER / OPERATOR

C. Phone No.

264-5454

D. Signature

Scott Steinbach

E. Date Signed

3/27/2012

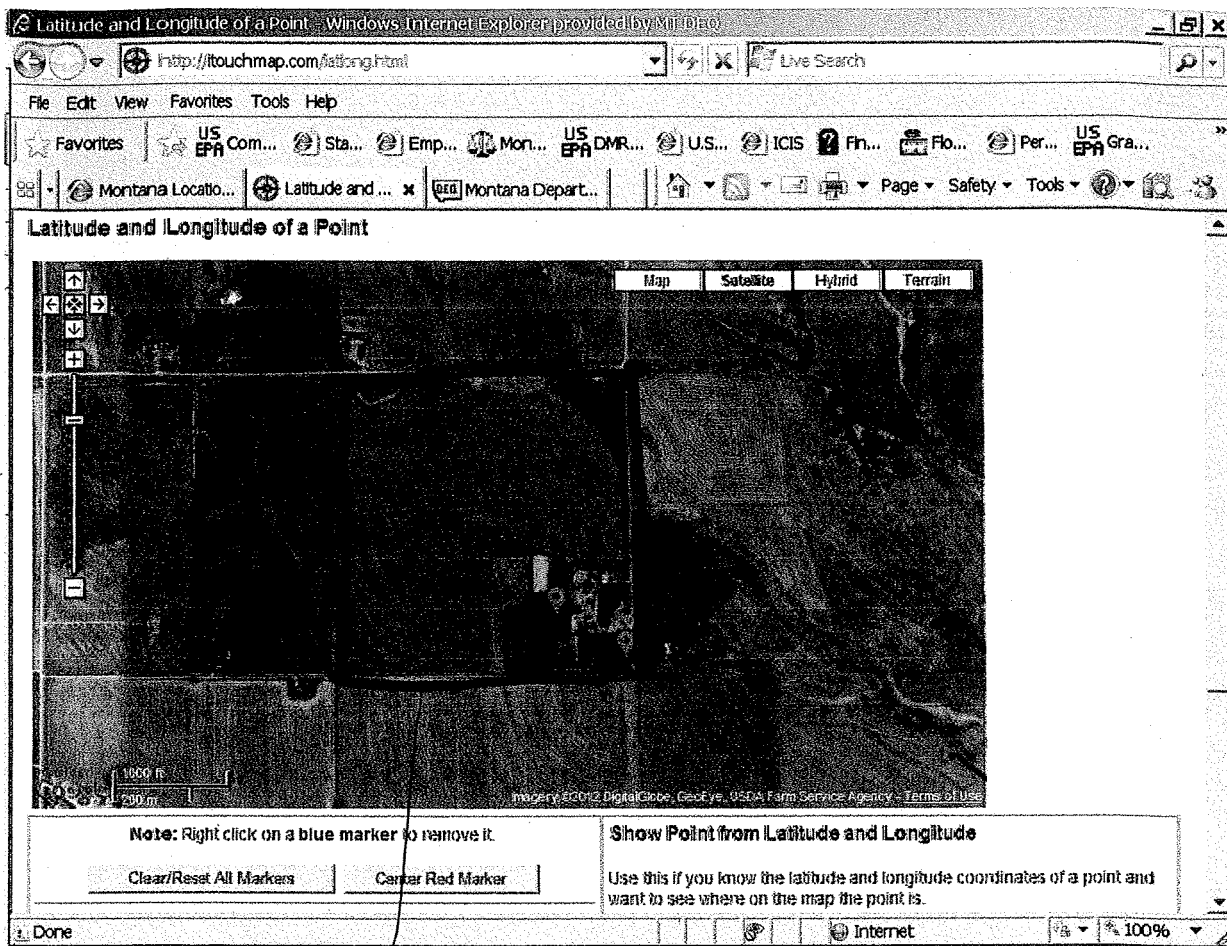
Return the Form NMP, Nutrient Management Plan to:

Department of Environmental Quality
Water Protection Bureau
PO Box 200901
Helena, MT 59620-0901
(406) 444-3080

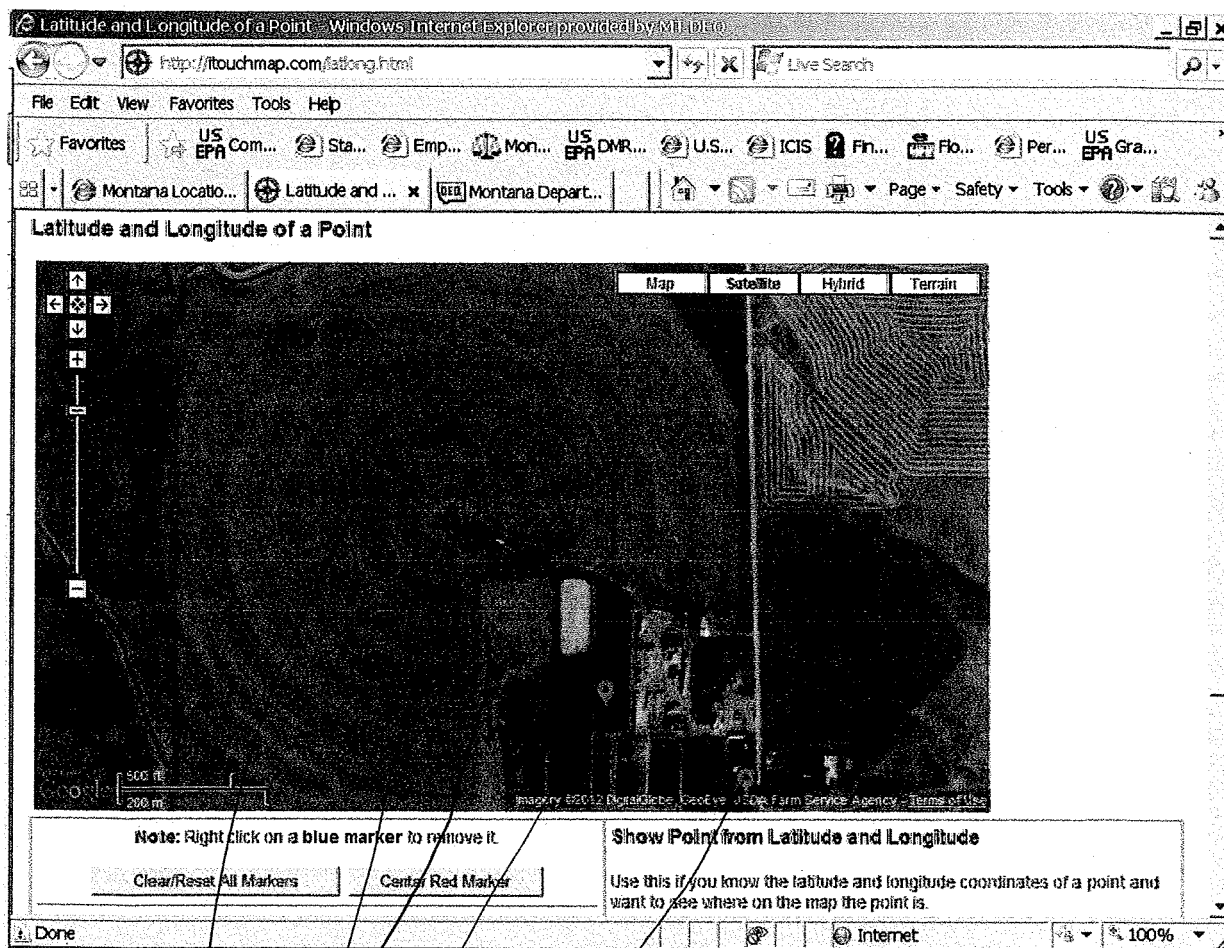
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Steinbach feedlot boundary



Land application Site:

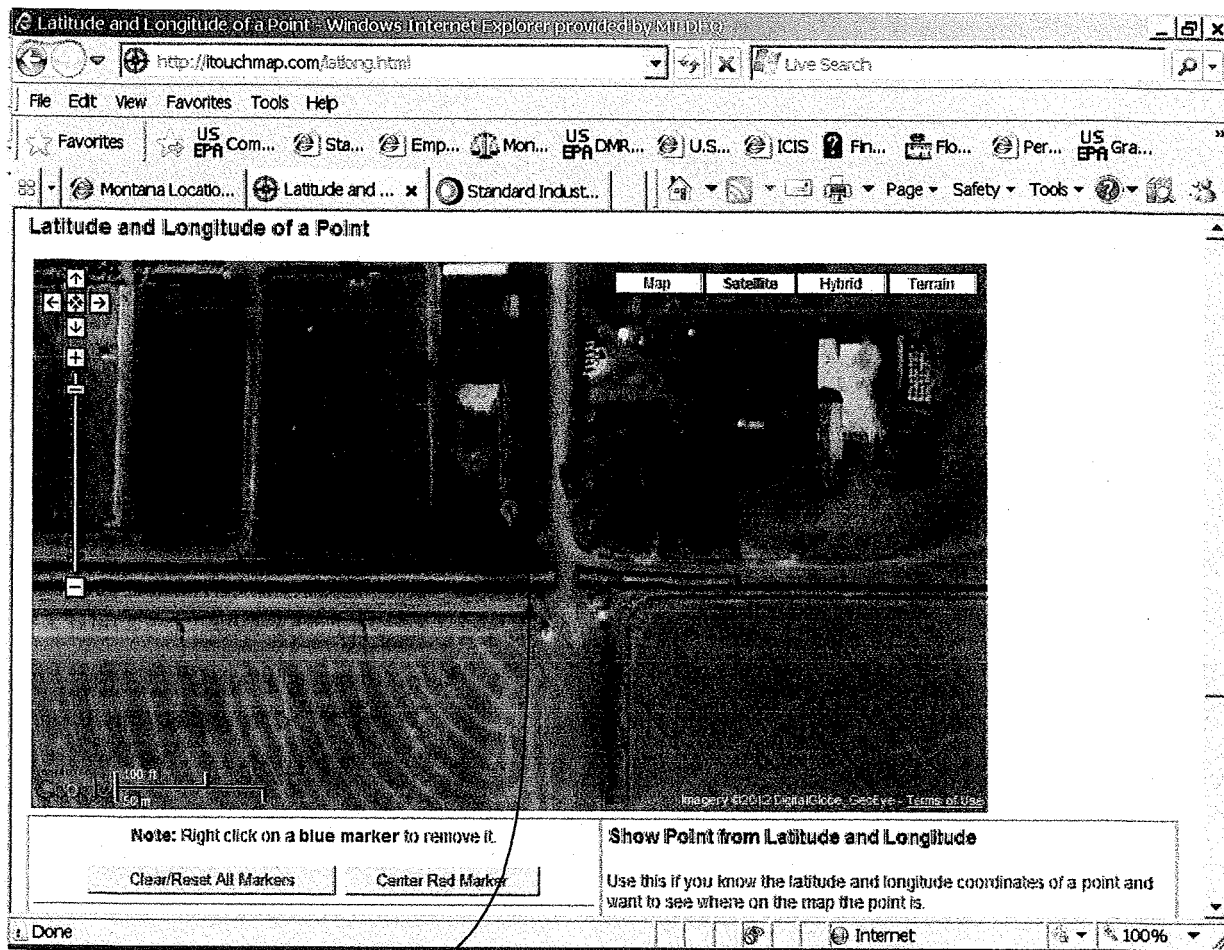
Wastepond

center of feedlot

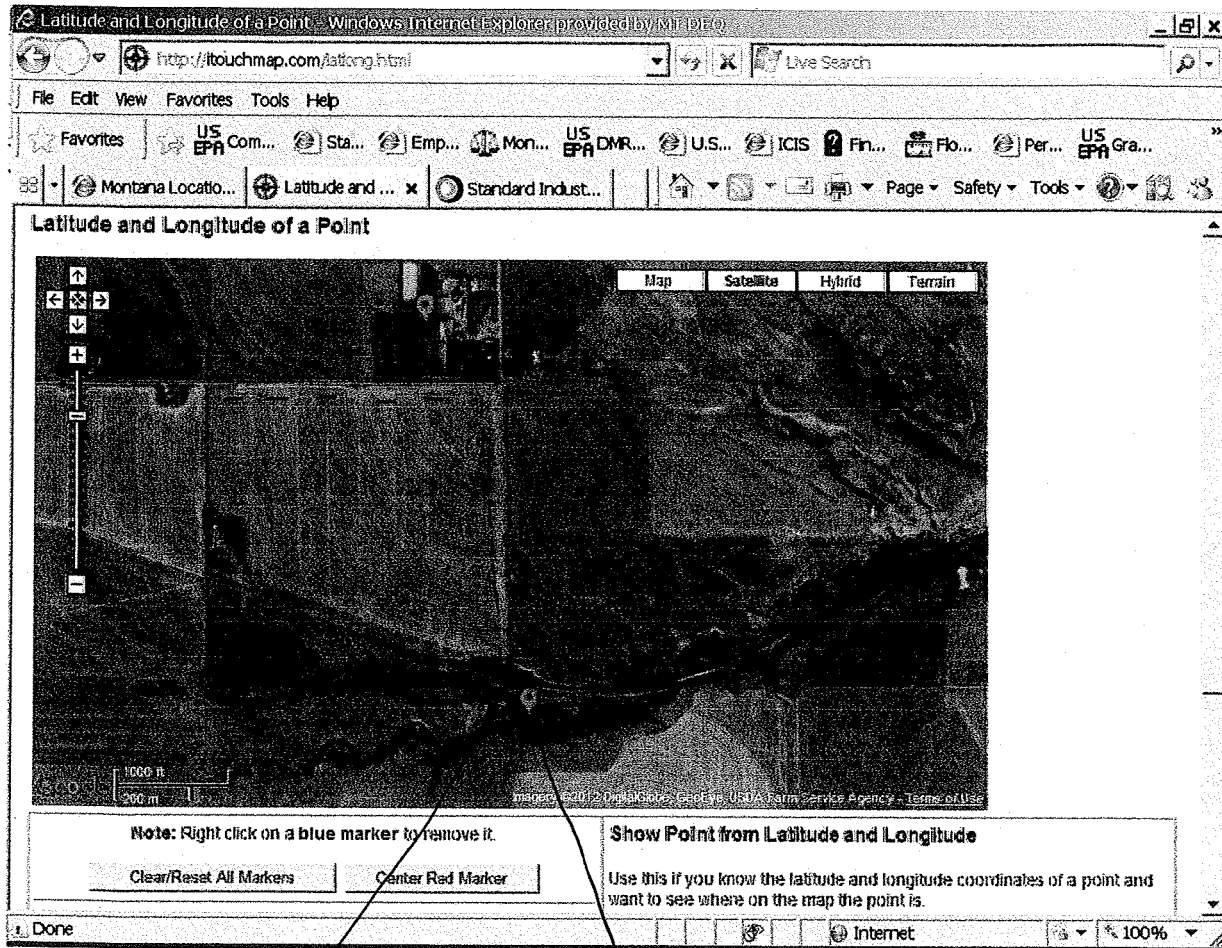
center of pivot

roadway and burms to prevent clean water from entering feedlot

Ditches and burms

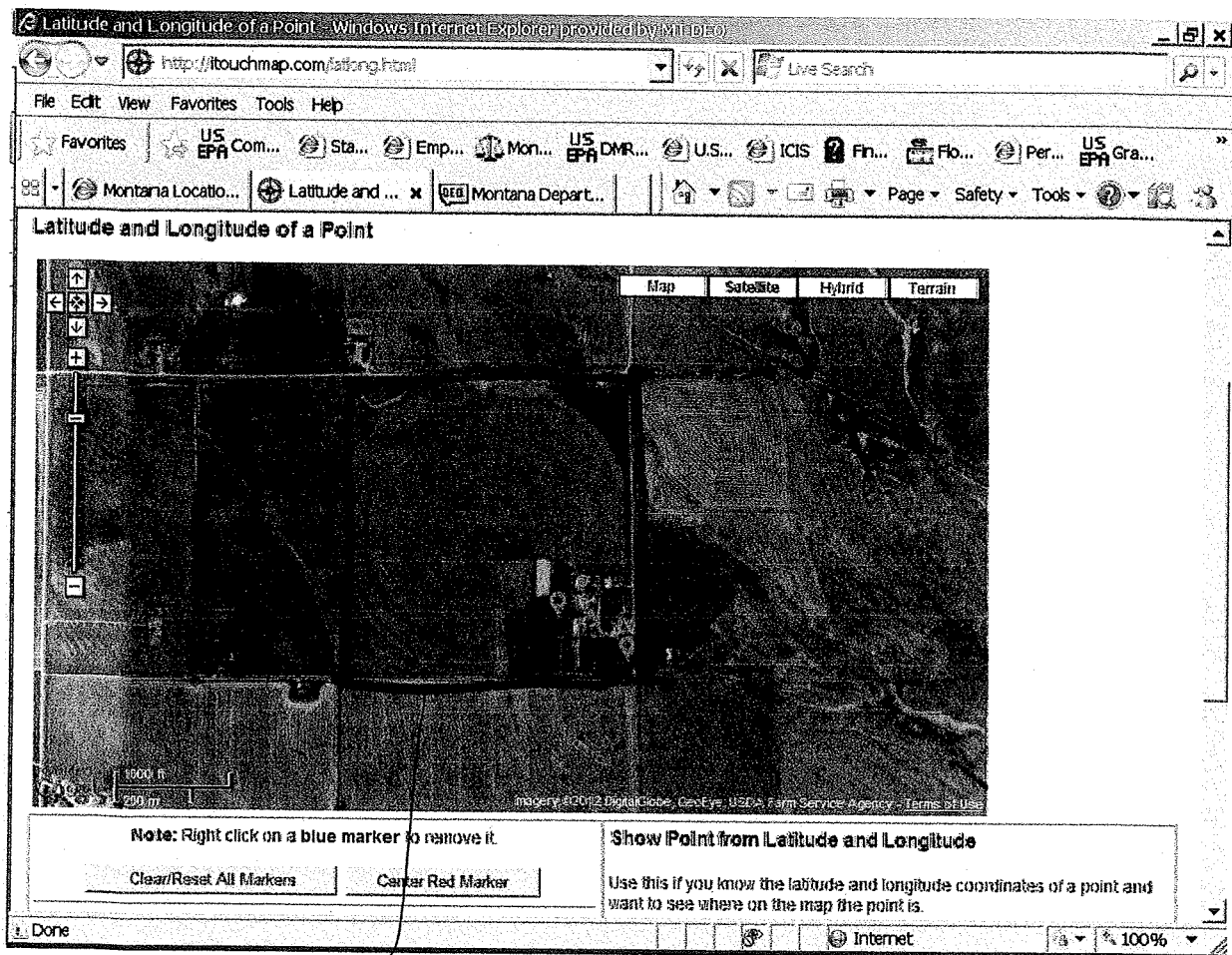


waste pond



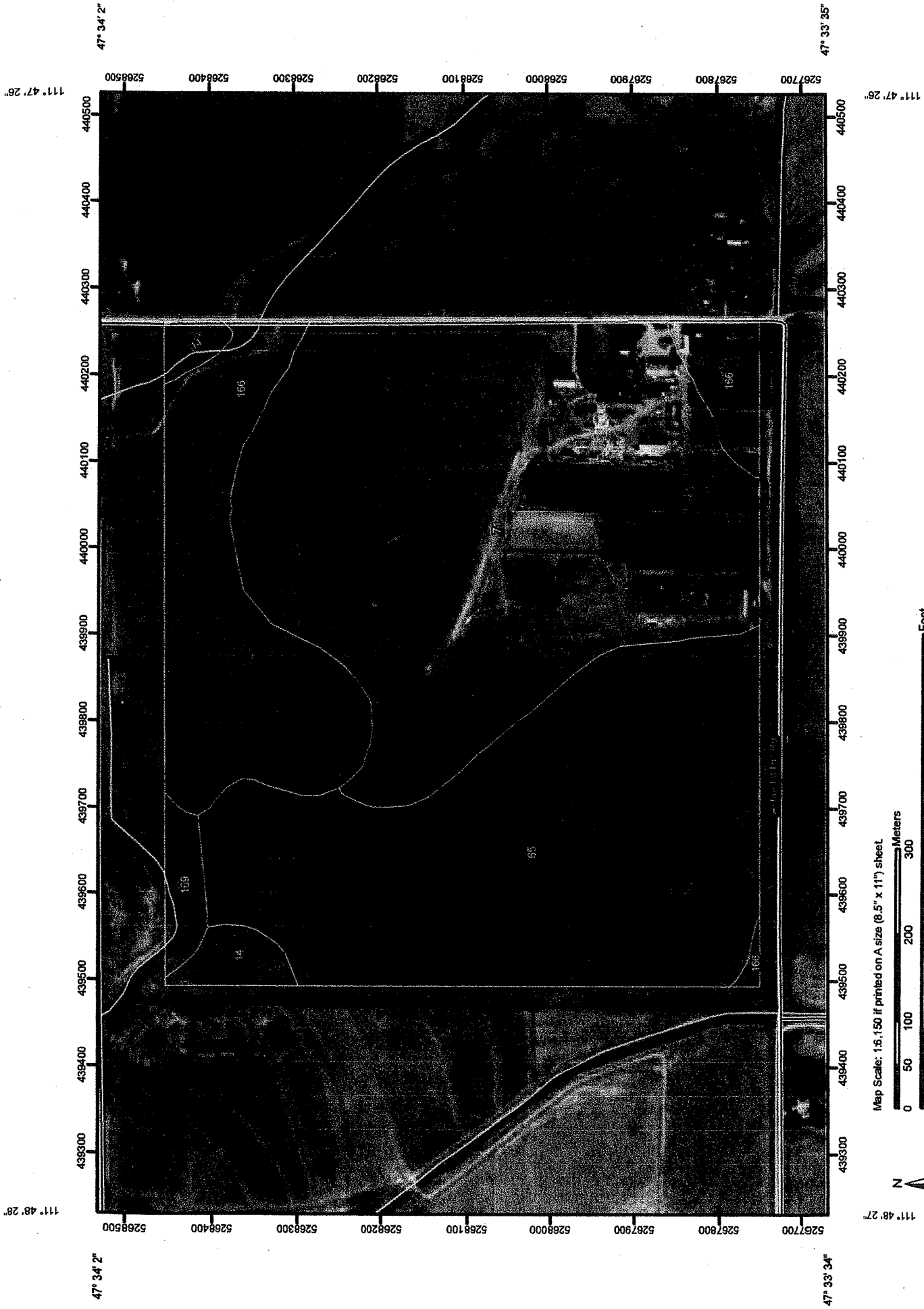
unnamed survivor drainage

ditch to the south and ditch to the unnamed drainage













































Steinbach feedlot boundaries

Soil Map—Cascade County Area, Montana
(Steinbach Feedlot)



MAP LEGEND

	Area of Interest (AOI)		Area of Interest (AOI)
	Very Stony Spot		Wet Spot
	Other		Special Line Features
	Soil Map Units		Gully
	Special Point Features		Short Steep Slope
	Blowout		Other
	Borrow Pit		Political Features
	Clay Spot		Cities
	Closed Depression		Water Features
	Gravel Pit		Streams and Canals
	Gravelly Spot		Transportation
	Landfill		Rails
	Lava Flow		Interstate Highways
	Marsh or swamp		US Routes
	Mine or Quarry		Major Roads
	Miscellaneous Water		Local Roads
	Perennial Water		
	Rock Outcrop		
	Saline Spot		
	Sandy Spot		
	Severely Eroded Spot		
	Sinkhole		
	Slide or Slip		
	Sodic Spot		
	Spoil Area		
	Stony Spot		

MAP INFORMATION

Map Scale: 1:6,150 if printed on A size (8.5" x 11") sheet.

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for accurate map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>
Coordinate System: UTM Zone 12N NAD83

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Cascade County Area, Montana
Survey Area Data: Version 9, Jan 4, 2012

Date(s) aerial images were photographed: 7/20/2005

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Cascade County Area, Montana (MT613)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
14	Aquepts and Aquolls, saline	2.8	2.1%
65	Ethridge silty clay loam, 0 to 2 percent slopes	46.6	34.9%
71	Evanston clay loam, 0 to 2 percent slopes	60.2	45.0%
166	Rothiemay loam, 0 to 2 percent slopes	22.1	16.5%
169	Rothiemay-Binna loams, 2 to 4 percent slopes	1.9	1.4%
Totals for Area of Interest		133.7	100.0%